market today. Competition has caused nominal prices to decline considerably and the market to expand. For example, a ten minute weekday call using AT&T from Washington, DC to Los Angeles cost $5.15 in 1982; ten years later, the same call cost $2.50.[45] On average, interstate long distance prices for residential customers have declined by 50 percent in real terms.[46] Price reductions, in turn, precipitated growth in the industry. Revenues in the long distance market grew by 53 percent in the eight years following divestiture.[47] Most of this revenue growth has come from new entrants into the market. The two long distance carriers which have penetrated the market most successfully since divestiture are MCI and Sprint, whose average revenue growth were 20.9 and 19.3 percent per year, respectively, during this period.[48]

Furthermore, as a result of this intense competition, U.S. firms have developed advanced skills in marketing which their international counterparts have not. The long distance carriers have engaged in a seemingly endless battle to win customers by offering a slew of specialized, discount service packages. These skills should give U.S. firms a sizable advantage in foreign market competition.

2. International Competitiveness

Comparing the efficiency of U.S. with global telecom services firms is a daunting task. Telecom firms in different countries operate with significantly different regulations and universal service requirements, and no two telecom services firms provide exactly the same service. (e.g. KDD of Japan provides international services while AT&T provides mobile, long distance, and international services.) The problems of measuring competitiveness have resulted in controversy over which formulas are meaningful indicators of a firm's potential success or failure in foreign markets.

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[45]Federal Communications Commission, 1992/1993. *Statistics of Common Carriers*. Washington: U.S. Government Printing Office, p. 264.
[46]U.S. House of Representatives, Anne K. Bingaman speaking before the Committee on the Judiciary in testimony on H.R. 3626, 103rd Congress, 26 January 1994.
[47]U.S. Department of Commerce, *op. cit.*, p. 29-6.
[48]*Ibid.*

a. Basic Voice Services

Three measures of international competitiveness have been widely used to evaluate telecom service firms -- revenue per employee, access lines per employee, and measures of labor and capital productivity. To date, none of these measures have gained acceptance as the universal standard of competitiveness. However, by each proposed measure of competitiveness, U.S. firms have been rated the most efficient telecom services providers in the world. With each of these measures showing U.S. dominance, it is difficult to counter the assertion that U.S. telecom services firms are the most efficient in the world.

In 1993, Merrill Lynch released a report on the efficiency of global telecom services providers based on revenue per employee.[49] In this analysis, the three primary U.S. long distance carriers rank first, second, and third. (See Table 2.2) MCI, in particular, was shown to be by far the most competitive firm in the world – nearly 80 percent more efficient than its nearest competitor, Sprint.[50]

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[49]This measure of efficiency is used by the Department of Commerce in its *1994 Industrial Outlook* to assess the competitive strength of U.S. telecom service firms.

[50]This measure of efficiency is upwardly biased toward long distance companies and negatively biased towards local exchange carriers. MCI's remarkable efficiency rating is heightened by the quality of the measurement. While most nations have monopolies which provide both local and long distance service, the primary business of MCI, Sprint, and AT&T is long distance service. Sprint competes in a number of telecom sectors including local exchange, long-distance, and cellular services which negatively biases its score.

Table 2.2: Efficiency of Telecommunications Services Providers, 1993, Company Revenue per Employee (in thousands of dollars). Source: Merrill Lynch

Company	**Revenue/ Employee**
MCI	**383**
Sprint	**216**
AT&T	**213**
Hong Kong Telecom	200
NTT (Japan)	196
RBOCs (U.S.)	168
TELMEX (Mexico)	165
Cable & Wireless (U.K.)	163
GTE (U.S.)	149
TEF (Spain)	147
Bell Canada	143
STET (Italy)	136
Telecom New Zealand	123
British Telecom	120
Telefonica de Argentina	101
Telefonos de Chile	97

In October 1992, the McKinsey Global Institute, a subsidiary of McKinsey & Co., released a comparative study of global telecom firms' productivity based on the number of calls handled per employee and per dollar of investment. Again, U.S. telecom services firms were rated the most productive providers in the world, surpassing firms in Europe and Japan. The study found that labor productivity among U.S., Japanese, and French phone companies is comparable, while Germany's and the U.K.'s productivity is about 20 and 40 percent less than the United States respectively. However, when capital investment is considered with labor productivity, the study found that the U.S. telecom services industry is far more efficient than those in Europe or Japan. U.S. phone networks handle four times as many calls per dollar of investment as those in France and Germany and twice as many as those in the United Kingdom.[51]

b. Enhanced Services

U.S. firms are also extremely competitive in the enhanced services industry. Most enhanced services were pioneered and refined by U.S. firms, and only recently have serious foreign competitors entered the market. The Office of the United States Trade Representative cites evidence that the U.S. enhanced services industry (which includes the 'new' telecommunications services such as on-line database, data processing, and storage and forwarding services) is by far the most competitive in the world.[52]

c. Mobile communications

In cellular/mobile communications, U.S. mobile communications services firms are widely regarded as among the most competitive in the world. U.S. firms have dominated foreign license competitions for cellular service, winning 49 percent of all licenses awarded to foreign firms, while firms from Sweden and the United Kingdom remain a distant second and third with 15 and 12 percent respectively.[53] Figure 2.1 outlines the share of all cellular service licenses awarded to foreign firms by countries of licensees in 1993.

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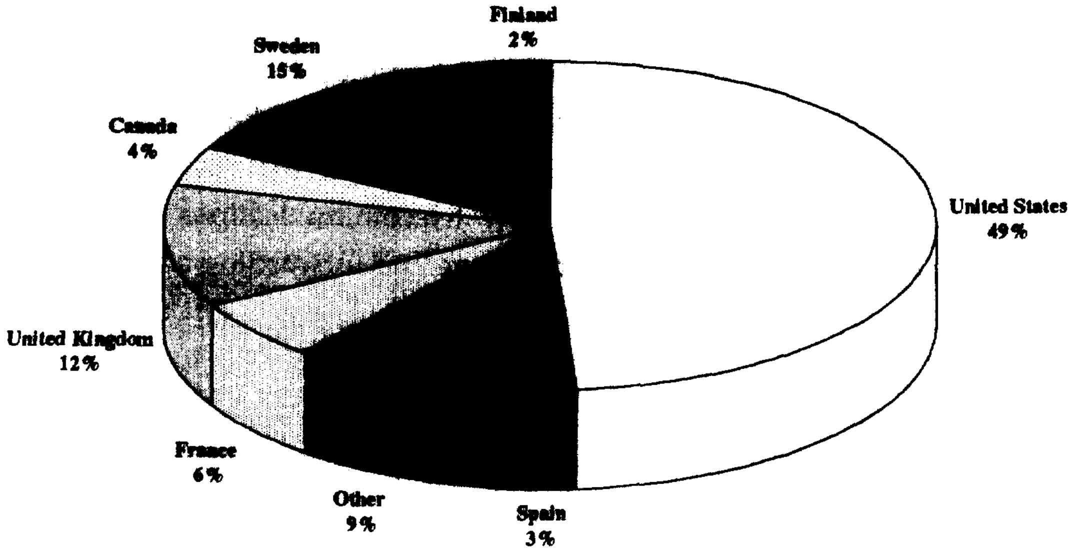
[51]David Wessel. "U.S. Excels in Service Productivity Poll," *The Wall Street Journal*, 13 October 1992, p. A2.

[52]Enhanced services change the form of the transmission or store the transmission for a period of time and thereby add value to the transmission.

[53]U.S. International Trade Commission, *Global Competitiveness of U.S. Advanced Technology Industries: Cellular Communications*, 332-329, June 1993, p2-8.

Figure 2.1: Share of All Cellular Licenses Awarded to Foreign Firms, by Countries of Licensees, 1993.[54] Source: U.S. Intenational Trade Commission. 1993. *Global Competitiveness of U.S. Advanced-Technology Industries: Cellular Communications*. Washington: U.S. Government Printing Office, p. 2-8.



The combined findings of these studies using different measures of efficiency are indisputable -- U.S. telecom services providers are the most competitive in the world, bar none. U.S. firms are the lowest cost providers in the world, provide high quality, innovative services, and have gained significant marketing and technical experience by operating in the most competitive market in the world. Therefore, U.S. firms are in an excellent position to compete (and capture substantial market share) in foreign telecom services markets.

B. U.S. Firm Participation in Foreign Markets

Over the last decade, U.S. telecom firms have announced aggressive plans to expand overseas operations. AT&T recently announced a goal of drawing 50 percent of the firm's revenues from overseas operations by the year 2000. Sprint and MCI are both actively seeking to enter mobile and basic telephony markets in Asia, South and Central America, and Central and Eastern Europe. The Baby

[54]Includes foreign firms represented in winning consortia and contracts awarded to more than one foreign firm. The market shares do not add up to 100 percent due to rounding.

Bells, restricted from expanding in the U.S. market, now own and operate foreign ventures ranging from cellular and PCS service to basic telephony. The chairmen of Bell Atlantic and US West expect international operations to generate a sizable portion of total company revenue by the year 2000. These ambitious expansion and investment projects are an acknowledgment of the opportunities and increasing importance of foreign markets to the long-term growth and revenue of U.S. telecom firms. As a recent Office of Technology Assessment report concluded, "U.S. firms are looking abroad because of new opportunities and because their future depends increasingly on growth in foreign markets."[55]

The actual pattern of U.S. foreign direct investment, however, is puzzling at first glance. U.S. foreign investment in traditional telephone service provision (the most lucrative service) has been concentrated in a handful of countries, most notably the United Kingdom and New Zealand, while the majority of U.S. mobile/cellular investments have occurred in developing markets (South and Central America and Central and Eastern Europe). U.S. investment in many of the world's most lucrative and promising basic services markets -- the European Union, Japan, and China -- is almost non-existent. Despite the vast opportunities unfolding in foreign telecom markets and the public announcements of the desire to enter these markets, U.S. firms are notably absent from a number of key foreign markets and are oddly minor participants in others.

1. U.S. Foreign Direct Investment in Basic Voice Service Markets

a. Western Europe

The only country where U.S. firms have substantial foreign investment is the United Kingdom. Both Sprint and AT&T have been licensed to provide nationwide basic telecom services, and the Baby Bells and U.S. cable companies have been particularly aggressive in the British cable and local telephony market. NYNEX, USWest, TCI, Pacific Telesis, Southwestern Bell, and Cox Cable all have substantial holdings in the United Kingdom cable telco market.[56]

[55]Office of Technology Assessment, *op. cit.*, p. 71.
[56]In the United Kingdom, local service providers are permitted to carry and deliver both cable television and basic telephony (telco) services to customers.

b. Central and Eastern Europe

The U.S. presence in the basic service markets of Central and Eastern Europe is currently small, but is expected to expand significantly in the future. AT&T has a 39 percent stake in a project to build and operate a modern telecom network in the Ukraine. In Hungary, the first Eastern European country to tender local telephony contracts, foreign-led consortia won in 15 of Hungary's 54 telephony districts and U.S.-led consortia won eight of these licenses.[57] The Hungarian national telecom operator, Matav, which is partly owned by Ameritech, took 38 districts.

c. Asia-Pacific Region

U.S. firms have entered aggressively into the New Zealand telecom service market. Bell Atlantic and Ameritech own 49.9 percent of Telecom NZ, the dominant carrier in New Zealand, while its main competitor, Clear Communications, is jointly owned by MCI, Bell Canada International, and three New Zealand companies. U.S. firms are also active in New Zealand's pay-television market. In Australia, BellSouth has been awarded a license to become a comprehensive wireline and wireless facilities-based operator. U.S. firms are not present, however, in any of the other major Asia-Pacific markets for basic telecom services.

d. South and Central America

U.S. firms have by far the most international basic service operations in South and Central America. Mexico, which will open its long distance market in 1997, has been the focal point of U.S. foreign direct investment. Southwestern Bell owns a 10 percent share of TELMEX, the Mexican national carrier. MCI formed an alliance with Mexico's largest financial group to provide services, AT&T has engaged in discussions with TELMEX to provide long distance service, and Sprint formed a joint venture with Grupo Iusacell to compete in Mexico's long distance market. U.S. firms have participated in foreign and domestic consortia that have successfully bid to provide basic services in Chile, Argentina, Uruguay, and Venezuela. Furthermore, U.S. firms are expected to bid for stakes

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[57] "Hungary Awards Phone Contracts," *Financial Times*, 1 March 1994.

in the basic telecom markets of Columbia, Brazil, Paraguay, Nicaragua, and Honduras by the end of the year.[58]

2. U.S. Foreign Direct Investment in Mobile Communications Markets

a. **Western Europe**

In Western Europe, U.S. firms are mainly involved in cellular franchise consortia which compete with the public telephone operator's cellular division. U.S. firms participate in operating mobile/cellular phone systems in Denmark, Germany, France, the United Kingdom, and Portugal.[59]

b. Central and Eastern Europe

U.S. firms are participating in a substantial number of international mobile/cellular communications ventures in Central and Eastern Europe. Foreign cellular participation has been most prevalent in Eastern Europe and the former Soviet Union. These countries have allowed foreign mobile communication firms with superior technology and experience to bid for national cellular and paging licenses. US West has stake in cellular franchises in Slovakia, Georgia, Czech Republic, Latvia, Bulgaria, Hungary, and Russia. In addition to cellular ventures, U.S. firms are providing data and enhanced services in Eastern Europe, such as Sprint International's data service facilities in Romania and Russia. Table 2.3 shows U.S. participation in cellular markets of Eastern Europe and the former Soviet Union.

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[58]"Telecom Privatization in Latin America," *Telecommunications*, (March 1994): 61.

[59]U.S. International Trade Commission. *Global Competitiveness of U.S. Advanced-Technology Industries: Cellular Communications*. (Washington, D.C.: Government Printing Office, 1993), p. 5-4.

Table 2.3: U.S. Firm Participation in the Cellular Markets of Eastern Europe and the Former Soviet Union. Source: U.S. International Trade Commission, *op. cit.* p. I-1.

Country	Foreign Cellular Partner	Owner-ship	Award Date	Comments
Czech Republic	US West, Bell Atlantic	24.5%	1990	$60 million investment over the next ten years.
Hungary	US West	49%	1989	US West, to date, has invested $13 million.
Poland	Ameritech, France Telecom	24.5%	1991	$50 million investment over three to four years.
Romania	Nationwide Cellular (U.S.)	51%	1991	
Russia (Moscow)	Plexys Int. (U.S.)	100%	1992	
Russia (Moscow)	US West, Millicom Cellular (U.S.)	22% 20%	1991	$7 million initial investment.
Russia (St. Petersburg)	US West	40%	1991	Priority investment to international gateway.
Lithuania	Millicom Cellular (U.S.)	49.0%	1991	Will also establish international satellite links.
Belarus	CommStruct Int. (U.S.)	50%	1991	

c. Asia-Pacific Region

U.S. firms are present in only a few of the major Asia-Pacific cellular markets. BellSouth has been licensed to provide cellular service in Australia and New Zealand. Although a number of foreign firms participate in Japanese cellular consortia, in all cases they are marginal players. U.S. firms have been awarded minimal stakes in the Japanese cellular ventures, with the exception of Pacific

Telesis. Table 2.4 shows the participation of U.S. firms in the Japanese cellular market.[60]

Table 2.4: U.S. Firm Participation in The Japanese Cellular Market. Source: U.S. Intenational Trade Commission. 1993. *Global Competitiveness of U.S. Advanced-Technology Industries: Cellular Communications*. Washington: U.S. Government Printing Office, p. 5-4.

City/Region	Partners	Foreign Ownership	Percent Foreign Stake	Average Foreign Stake
Tokyo/Nagoya (A)	Motorola (U.S.), British Telecom (U.K.), GTE (U.S.), US West (U.S.), Rogers Cantel (Canada), NYNEX (U.S.)	8.0% 5.0% 3.0% 2.0% 2.0% 1.0%	21%	3.50%
Tokyo/Nagoya (B)	Pacific Telesis (U.S.), Cable and Wireless (U.K.)	15.0% 8.0%	23.0%	11.5%
Osaka/Kobe/Kyoto (A)	British Telecom (U.K.), NYNEX (U.S.), GTE (U.S.), Motorola (U.S.)	5.0% 2.0% 1.5% .25%	8.75%	2.18%
Osaka/Kobe/Kyoto (B)	Pacific Telesis (U.S.), Cable and Wireless (U.K.)	13.0% 7.2%	20.2%	10.1%

d. South and Central America

U.S. firms have been extremely active in the cellular markets of South and Central America. Bell Atlantic recently purchased a 42 percent share of Mexico's second largest cellular operator, Grupo Iusacell. Argentina, Mexico, Chile,

[60]Several firms ESI interviewed believe the Japanese strategy is to include foreign firms only when Japanese firms are unable to provide the technical expertise needed and that the inclusion of a large number of foreign firms is designed to minimize the gains made by any single foreign firm. Pressure from the U.S. government was also instrumental in opening this market.

Venezuela, and Uruguay have licensed U.S. firms (solely and in consortia) to run cellular systems.

3. Conclusions

> ***While U.S. firms have aggressively entered a select number of foreign markets, the majority of countries prohibit or restrict U.S. foreign direct investment, particularly in basic services.***

Considering the aggressive rhetoric of many U.S. firms and the vast opportunities unfolding in foreign markets, it is curious that U.S. firms are absent, or are minor participants, in so many foreign markets. The reasons for the concentration of U.S. investment in a handful of countries are foreign government regulations and closed foreign markets that hinder U.S. firms from taking advantage of their technological leadership and greater efficiency. There are some markets where foreign firms have been awarded cellular and wireline contracts over U.S. firms, but this can not explain the complete absence of U.S. firms from so many vital markets. The overwhelming majority of foreign countries restrict foreign direct investment in their markets and thereby prevent U.S. and other foreign firms from exploiting their comparative advantage in these markets.

CHAPTER III: FOREIGN AND INTERNATIONAL REGULATIONS

U.S. firms are blocked from the majority of lucrative international opportunities by foreign government regulations prohibiting or restricting U.S. participation, and by international regulations that discriminate against and overcharge U.S. firms and consumers. The following is an analysis and comparison of the regulations and restrictions placed on foreign firms in U.S., European, and selected Asia-Pacific telecom markets. This chapter also reviews the accounting rate system, the widely used international settlement system for connecting international calls, and its implications for U.S. consumers and firms.

A. Foreign Participation in Telecom Markets

Most foreign countries prohibit U.S. firms from participating in their domestic market. Only a handful of countries (such as New Zealand and the United Kingdom) grant foreign firms market access which is comparable to the market access the United States grants. Government restriction of competition and foreign participation can take three primary forms:

- *Governments limit the number of carriers licensed to participate in the market.* Governments can place quantitative restrictions on the number of firms which can participate in their telecom market. Telecommunications firms can provide service in one of two ways: by owning the physical network (the phone lines and switching equipment) required to transmit or terminate a call, or by paying a facilities-based operator for the use of its network. The first operator is known as a facilities-based operator and the latter a resale operator. Countries typically prohibit all resale operations and limit facilities-based operations to one national carrier who is usually government-owned and controlled. In the few cases where competition is allowed, there are severe restrictions.

- *Governments establish foreign ownership restrictions.*
  Governments can also limit the degree to which foreign firms participate in the market by establishing foreign ownership restrictions. Even if a government maintained a monopoly in a certain telecom sector, foreign firms could still conceivably invest in that firm. Most foreign governments are the sole owner of the monopoly carrier. When foreign investment is permitted, most countries (including the United States) limit the percentage of a domestic carrier which can be owned by foreign interests.

- *Governments fail to protect new firms from the market power of the dominant carrier.*
  Governments can discriminate against foreign firms by adopting regulations which apply only to foreign operators or by allowing dominant firms to thwart the entry of foreign firms. Many governments maintain policies that directly and indirectly discriminate, or allow the dominant carrier to discriminate against foreign firms. Lack of governmental oversight allows some monopoly providers (or de facto monopoly providers) to discriminate against foreign firms by charging higher interconnection rates or hindering customer access to the foreign service provider.

1. The U.S. Market

a. Limits on the number of providers

In basic voice telecom services, foreign competition is permitted in long distance and international service provision while local service, which is provided by the Baby Bells and other local exchange carriers, is generally monopolistic.[61]

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[61]Competition is being allowed into the local exchange in a small but increasing number of regions. State public utilities commissions consider competitive entry into the local exchange services market on a case-by-case basis and some now seem more inclined to allow competition. For example, MFS Communications Corporation has been granted permission by the Maryland Public Service Commission to compete with Bell Atlantic for business and government customers. Local exchange carriers (LECs) also face a small degree of competition from

Foreign firms have been particularly active in the U.S. long distance and international service markets. In 1992, nearly 500 domestic and foreign subsidiaries participated in the U.S. long distance market. 27 firms (common carriers) operated as facilities-based providers, and nearly 100 operated as resellers of international services.[62] Of this total, at least 12 are subsidiaries of foreign firms, including Cable and Wireless (U.K.), now the fifth largest U.S. long distance carrier. The United States also allows foreign firms to provide two-way international service: service from the United States to a foreign country and vice-versa. For example, Telefonica de España can provide all of the international telecom services needs of a firm with locations in Puerto Rico and Spain.[63]

Mobile/cellular, satellite,[64] and enhanced services[65] are similarly open and competitive in the United States. In mobile communications, the United States currently manages a regional duopoly in cellular services but competition will significantly expand in December when the FCC auctions spectrum for personal communication services (PCS).

When the FCC originally awarded analog licenses in 1981, there were only a few non-U.S. cellular firms. As a consequence, there are no major foreign mobile

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competitive access providers (CAPs). CAPs connect large business customers directly to a long distance company's "point of presence" (the point where the local exchange and long distance lines physically connect), hence by-passing the local exchange. CAPs are still a relatively small part of the local telephone network, accounting for less than 0.25 percent ($200 million) of LEC revenue in 1992 according to the U.S. Department of Commerce.

[62] Federal Communications Commission, *Statistics of Communications Common Carriers 1992/1993 Edition*, (Washington, D.C.: Government Printing Office), p. 203.

[63] U.S.-based international services providers can be subject to dominant carrier status on those routes serving their home nation.

[64] It is misleading to discuss the satellite policy of individual nations in this context because of the nature of orbital space ownership rights. Nations do not own the rights to the orbital space above their terrestrial borders; technically anyone can place a satellite in orbit. However, if the satellite is stationed directly above a nation, it must receive permission from that nation to transmit. If the satellite is not stationed above that nation, it is free to transmit to that nation without prior approval.

[65] The market structure of each nation's enhanced services sector will not be discussed in this section. The United States secured market opening commitments from 43 other nations in the Uruguay Round of the General Agreement on Tariffs and Trade. The United States committed to open its enhanced services market without reservations as did many of the other signatories. Several U.S. telecommunications services firms have expressed doubt that some nations (particularly Japan) will fulfill their GATT commitments and completely liberalize their enhanced services market.

service providers in the United States. Foreign firms can participate directly in the U.S. cellular market by purchasing licenses on the resale market or by investing in U.S. firms. For example, in 1989, British Telecom purchased a 22 percent stake in McCaw Cellular Communications, the largest U.S. cellular operator.[66] The market structure and level of foreign participation allowed in the U.S. telecom services market is summarized in Table 3.1.

Table 3.1: Market Structure and Level of Foreign Participation Allowed in the United States. Source: Economic Strategy Institute.

Type of Service	Basic Voice Local	Long Distance and International	Mobile/Cellular	Enhanced Services
United States	Regionalized Monopoly	Open and Competitive	Regionalized Duopoly: Open to foreign firms.	Open and Competitive

b. Foreign ownership restrictions

Although the United States does not restrict the number of foreign carriers that can participate in the telecom market (with the exception of local and cellular services), U.S. law does limit foreign ownership in telecom firms (called common carriers). Foreign firms are prohibited from holding common carrier radio licenses, owning more than 20 percent of U.S. firms holding a radio license, or having any representation on the board of a U.S. radio license holder.[67] The subsidiary of a foreign firm can hold a common carrier radio license, but the parent firm is limited to 25 percent foreign stock ownership, foreign directors, and foreign officers. These provisions were originally established in the Communications Act of 1934 to prevent foreign countries from spreading propaganda in the United States. The FCC has the power to waive these restrictions on request.[68] Table 3.2 summarizes U.S. ownership restrictions.

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[66]In 1992, AT&T purchased British Telecom's 22 percent stake in McCaw. This eliminated all direct foreign participation in the U.S. cellular services market.

[67]These restrictions apply in four radio-license sectors: broadcast, common carrier, aeronautical fixed, and aeronautical en route.

[68]In fact, the FCC has waived this provision on a number of occasions, including ENTEL Chile's 80 percent acquisition of AmeriTel, Telstra's (Australia) 39.7 percent equity stake in Digitran, and ChileSat's acquisition of 100 percent of NACX. In fact, in approving British Telecom's 20

Table 3.2: Foreign Ownership Restrictions in the United States. Source: Communications Act of 1934, (47 U.S.C. 310).

Foreign Ownership Restriction
Direct foreign ownership of a common carrier radio license is limited to 20 percent while indirect investment is limited to 25 percent.

c. Special obligations placed on foreign firms

The United States also places specific obligations on firms owned by foreign carriers. A U.S. firm with more than 15 percent foreign ownership, or with a representative of a foreign firm on its board of directors, is classified as a dominant carrier on those routes where the foreign owner holds monopoly power.[69] Firms with dominant carrier status are required to submit traffic, revenue, and tariff data more frequently and seek FCC authorization to construct new lines, extend existing lines, and acquire new lines. Non-dominant firms only need authorization for the construction of major cables and to initiate service to new countries. The purpose of this regulation is to prevent foreign monopolies (known as public telephone operators or PTOs) or firms with considerable home market power from using their dominant domestic position unfairly to disadvantage firms in the U.S. market.

d. Protecting new firms from former PTO market power

The United States has taken more steps than any other country to ensure that its former PTO (AT&T and the RHCs) do not impede fair market competition. The primary regulatory tool (applied to AT&T) is FCC's dominant carrier status (discussed in the previous section). AT&T and the RHCs are the only common carriers, without substantial foreign ownership, to be classified as a dominant carrier.[70] The U.S. government, through divestiture restrictions, cost-based

percent equity stake in MCI, the FCC allowed foreign ownership in MCI to exceed the Section 310 ceiling.

[69]If the foreign affiliate has bottleneck power (if somewhere in the network a call must pass through that firm's facilities to reach its final destination), it can also be classified as a dominant carrier.

[70]U.S. common carriers who are partly owned by foreign carriers are also classified as dominant carrier on those international routes served jointly by the foreign owner and the U.S. common carrier.

access regiments, and non-discrimination safeguards, has similarly ensured that the RHCs do not abuse their market power.

e. International Private Line Resale

The United States does restrict what is known as international private line resale to certain international destinations. The term international private line resale refers to the ability of a carrier to connect a private, international circuit to the public telephone networks in two countries and resell the service to another party (e.g. an international corporation).[71] This would enable IBM, for example, to make a call from anywhere in Britain to any destination point in the United States over a private international line. The private line is considerably cheaper than using a conventional line because private lines are not subject to accounting rate charges.[72] In 1991, the FCC created an equivalent resale opportunity standard which permitted international private line resale ". . . only on those routes where equivalent resale opportunities are provided to U.S. carriers."[73] This policy directive had two intended goals. The FCC wanted to prevent an expansion of the accounting rate deficit, and secondarily to expand the opportunities for U.S. firms in foreign countries.[74] Currently, only resale with the United Kingdom and Canada has been approved.[75]

2. The Asia-Pacific Region

a. Limits on the number of providers

U.S. firms face significant entry barriers in Asia-Pacific countries, with the exception of New Zealand and Australia. New Zealand launched an aggressive liberalization campaign. Telekom NZ, the former PTO, faces competition from

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[71] This restriction only applies to carriers -- not to customers.

[72] Accounting rate charges are discussed later in this chapter.

[73] Federal Communications Commission, CC Docket No. 90-337.

[74] Without equivalency, the net settlement deficit is exacerbated considerably. A firm can make international calls to the United States and avoid the accounting rate charge using a private line by 'bypassing' the international carrier. However, without equivalency, that firm can not bypass the international carrier on U.S. originated calls, for which the U.S. carrier is charged the settlement rate.

[75] The United Kingdom has adopted a similar standard. The U.K. policy states that "international simple resale services should only be permitted between the United Kingdom and those countries whose regulatory regimes allow an equivalent freedom to provide services in the reverse direction." Currently, equivalency has only been acknowledged in Canada, Sweden, and Australia. In almost all other countries, international private-line resale is not permitted.

Clear Commmunications in toll bypass, international, and leased-line service. In fact, both major domestic services providers are partly-owned by U.S. firms. Australia, Japan, and South Korea, however, keep local, long distance, and international services markets closed to foreign firms and limit the number of facilities-based operators. The Australian government owns a majority stake in the only two voice services providers, Telstra and Optus.[76] The only foreign mobile operator, Vodafone Australia, must be 51 percent Australian-owned by July 2003. In Japan, Nippon Telephone and Telegraph (NTT) is both a local exchange monopoly and a long distance provider. South Korea still maintains the typical PTO market structure. One competitor, Dacom Corp., is permitted to compete against Korea Telecom, the PTO, in international voice and data services. Basic voice services markets in the rest of Asia are almost always closed to foreign participation.[77]

In mobile/cellular services, only New Zealand maintains a market which is significantly open to foreign firms. New Zealand has licensed Bell South to operate a cellular service as well as Telecom NZ, a firm with 49 percent U.S. ownership. Recently, Australia licensed the first foreign firm to compete in the cellular market, while South Korea maintains a duopoly in cellular services and until recently has refused to consider foreign participation in their cellular market. The Japanese cellular market is governed by a regional duopoly similar to the United States. U.S. mobile service providers are completely locked out of Hong Kong, Taiwan, Thailand, Indonesia, and the People's Republic of China. Table 3.3 reviews the market structure and level of foreign participation allowed in Asia-Pacific countries.

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[76]The Australian government has announced plans for open competition in the Australian market in July 1997. Service provision as well as facilities construction will be permitted.
[77]Foreign firms are excluded from all basic services sectors in Thailand, Hong Kong, Indonesia, People's republic of China, and Taiwan. Long distance and international services have been partially liberalized in the Philippines.

Table 3.3: Market Structure and Level of Foreign Participation Allowed in Selected Asia-Pacific Countries. Source: "The State of Telecommunications Infrastructure and Regulatory Environment of APEC Economies," *Asia-Pacific Economic Cooperation*, Volumes 1 & 2, Nov. 1993 and June 1994.

Type of Service	**Basic Voice Local**	**Long Distance and International**	**Mobile/ Cellular**	**Enhanced Services**
Australia	Duopoly: Closed to foreign firms	Duopoly: Closed to foreign firms	Three firms licensed: One foreign firm	Open and Competitive
New Zealand	Open and Competitive	Open and Competitive[78]	Open and Competitive	Open and Competitive
South Korea	Monopoly	Monopoly	Regulated Duopoly: Limited foreign participation	Open and Competitive
Japan	Managed Competition: Closed to foreign firms	Managed Competition: Closed to foreign firms	Regionalized Competition: Foreign firm participation minimized	Open and Competitive
Singapore	Monopoly	Monopoly	Monopoly	Competitive but Closed to foreign firms
Malaysia	Monopoly	Managed Competition: Closed to foreign firms	Regulated Duopoly: Closed to foreign firms	Competitive but Closed to foreign firms.
China	Monopoly	Monopoly	Monopoly	Closed to foreign firms
United States	**Regional Monopoly**	**Open and Competitive**	**Regional Duopoly: Open to foreign firms**	**Open and Competitive**

[78]While New Zealand regulations restrict the number of international carriers, the two existing providers are both partly owned by foreign firms.

b. Foreign Ownership Restrictions

All of the Asia-Pacific countries under review have foreign ownership restrictions. These restrictions are summarized below in Table 3.4. Foreign firm ownership is banned or heavily regulated in almost all other Asia-Pacific countries.[79] In 1992, the United States and South Korea reached an accord establishing a 33 percent foreign ownership limit for Korean-based telecom services firms. However, in the licensing of a second cellular network, South Korea limited foreign firms to a 20.2 percent stake. The Office of the United States Trade Representative has protested the licensing process claiming that it was confusing, wrought with favoritism, and designed to thwart foreign participants.

Table 3.4: Comparison of Foreign Ownership Restrictions in Asia-Pacific Countries and the United States. Source: "The State of Telecommunications Infrastructure and Regulatory Environment of APEC Economies," *Asia-Pacific Economic Cooperation*, Volumes 1 & 2, Nov. 1993 and June 1994.

Country	**Foreign Ownership Restrictions**
Australia	Foreign ownership in Optus, a basic carrier, is limited to 49 percent.
New Zealand	49.9 percent ownership restriction on telecom firms.
South Korea	U.S. and Korean officials negotiated a 33 percent limit.
Japan	Facilities-based carriers are limited to 33 percent foreign ownership.
Other Asia-Pacific Countries	In every other country, foreign firms are restricted from wholly or partly owning firms.
United States	Direct foreign ownership of a common carrier radio license is limited to 20 percent while indirect investment is limited to 25 percent.

[79]Many Asia-Pacific governments - particularly in developing countries - are preparing to offer new telecom stock on domestic and international markets. Asia-Pacific telecom companies are likely to hit the markets with $3-4 billion of international equity offerings each year for the next three years in an attempt to upgrade their networks. However, it is very unlikely that foreign firms will be allowed to take sizable stakes in these firms (which, in almost every case, will have majority government ownership).

Other barriers to foreign participation have been identified in the Asia-Pacific region as well. For example, a GATT review of the Australian telecom market found a "substantial number of impediments to international participation." Barriers to free trade included the lack of plans for the post-duopoly regime after 1997 and the limits on foreign equity levels in two of three Australian carriers.

c. Protecting new firms from former PTO market power

Japan's Nippon Telephone and Telegraph (NTT) operates in a regulatory environment that, in effect, condones discrimination against new carriers. The Japanese government's limited regulatory oversight of NTT gives the former PTO the power to discriminate against new entrants and to block the entry of foreign firms. Newly-established carriers must connect their lines to NTT's (who has a monopoly in the local exchange) if they wish to provide city services. In 1992 the Japanese government refused to require NTT to charge appropriate rates (i.e. rates based on cost) for access to NTT's network and also refused to balance NTT's peculiar tariff structure.[80]

In conclusion, although national market structures and foreign firm access vary significantly across the Asia-Pacific region, in every country except New Zealand foreign firms are denied the same opportunities that the United States grants foreign firms in the U.S. telecom services market.

3. The European Market

a. Limits on the number of providers

Unlike the United States, the European telecom services market is characterized by state-owned monopoly operators and limited foreign competition. A study of the European market conducted by the Office of Technology Assessment (OTA) concluded that 85 percent of the E.U.'s telecom services market remains closed to foreign firms.[81] Almost all European countries restrict foreign firm access to the basic services market by preserving government-owned monopolies in local, long distance, and international voice telecom services. In fact, only one of the

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[80]World Bank, *Telecommunications Sector Reform in Asia: Towards a New Pragmatism*, paper number 232, p. 85.

[81]Office of Technology Assessment, *U.S. Telecommunications Services in European Markets*, (Washington, D.C.: Government Printing Office, August 1993), p. 5.

countries surveyed for this analysis, the United Kingdom, has allowed foreign firms to provide international telecom services. The existence of these monopolies means that both facilities-based and resale competition are forbidden in most European countries.

In mobile communications, most European countries maintain a regulated duopoly, while several others, including Spain, Ireland, and Switzerland, preserve monopolies. Countries which preserve duopolies have adopted a U.S. approach by giving one license to the monopoly public telephone operator (PTO) and the second to a consortium of firms including, in many cases, foreign firms. The European market for enhanced services is generally competitive and contains both foreign and domestic suppliers.

There are three exceptions to the European generalization: the United Kingdom, Sweden, and Finland -- the only European countries to allow competition in parts of their telecom services market. The United Kingdom has followed a deregulatory strategy that in some ways is more aggressive than deregulation in the United States. Local service in the United Kingdom has been completely liberalized and currently more than 20 North American firms (mostly U.S. firms) operate as both cable television and local telephony providers. The U.K. government also recently granted local, long distance, and international service licenses to six foreign firms (three of which are U.S. firms). However, the United Kingdom did not allow these foreign firms to become international facilities-based operators, thereby reducing the profit potential and long-term growth prospects of foreign firms. Sweden has licensed several foreign firms to participate in its long distance and international markets, including the U.K.'s Cable and Wireless, AT&T, France Telecom, and British Telecom. A comprehensive review of the market structure and the level of foreign participation allowed in selected European countries is provided in Table 3.5.

Table 3.5: Market Structure and Level of Foreign Participation Allowed in Selected European Countries. Source: Local and long distance data from Office of Technology Assessment, *U.S. Telecommunications Services in European Markets*, Washington, D.C.: GPO, August 1993. Mobile/Cellular data from U.S. International Trade Commission, *Global Competitiveness of U.S. Advanced-Technology Industries: Cellular Communications.* (Washington, D.C.: Government Printing Office, 1993.)

Type of Service	**Basic Voice Local**	**Long Distance and International**	**Mobile/ Cellular**	**Enhanced Services**
United Kingdom	Open and Competitive	Open and Competitive[82]	Multiple Licenses: Open to foreign firms	Open and Competitive
Germany	Monopoly	Monopoly	Duopoly: Foreign consortia in both carriers	Open and Competitive
France	Monopoly	Monopoly	Duopoly: Foreign consortia in one carrier	Open and Competitive
Sweden	Monopoly	Open and Competitive	Analog monopoly, digital competition	Open and Competitive
Italy	Monopoly	Monopoly	Duopoly: Closed to Foreign Firms	Open and Competitive
United States	**Regional Monopoly**	**Open and Competitive**	**Regional Duopoly: Open to foreign firms**	**Open and Competitive**

b. Foreign ownership restrictions

Foreign ownership restrictions vary considerably among European countries. The United Kingdom, Germany, and Finland have no legal restrictions on the

[82]Only resale is permitted in international basic services.

foreign ownership of telecom firms.[83] Several countries, including Spain, Portugal, and Denmark, limit the percentage of foreign ownership while others ban foreign investment (mainly in countries where PTOs still operate). Table 3.6 reviews the different foreign ownership restrictions throughout Europe.

Table 3.6: Comparison of Foreign Ownership Restrictions in the United States and E.U. Member States Source: Economic Strategy Institute.

Countries Without Restrictions	**Countries with Partial Restrictions** (foreign ownership limit in parentheses)	**Countries Forbidding Foreign Ownership**
United Kingdom Finland	Portugal (10%) **United States (20%)** Spain (25%) Denmark (49%) Germany[84] Italy[85]	France Belgium Greece Ireland Luxembourg

c. Protecting new firms from former PTO market power

For many years, the United Kingdom operated a regulatory environment that in effect discriminated against new carriers. The United Kingdom followed a policy of protecting the second domestic carrier, Mercury Communications, from excessive competition, as well as British Telecom. For example, while in the United States customers are granted equal access to the long distance companies (customers simply dial and are automatically connected to their long distance carrier), in the United Kingdom customers of carriers other than BT must use special access codes. Negotiating interconnection agreements with BT were plagued with complaints, including lengthy negotiations and charges of above-cost interconnection rates.

[83]Although some governments do own significant shares of the privatized PTOs (i.e. the British government's Golden Share).

[84]Deutsche Telekom is 100 percent government-owned. There are no foreign ownership restrictions in Mannesmann Mobilfunk.

[85]The Italian government has a majority stake in Telecom Italia, the newly-formed telecom conglomerate controlling all of Italy's fixed telephone operations.

Although many outstanding issues remain, the U.K. government has made progress in reducing some of the impediments to competition. Recently, the U.K. government decided that people who switched local telephone carriers could keep their telephone numbers. Until this decision, people received new phone numbers each time they switched local carriers.

Conclusions: Asymmetrical Market Access

> ***Access to basic voice telecom services markets is asymmetrical: U.S. firms are prohibited from participating in most foreign markets while foreign firms compete in a relatively open and fair U.S. market.***

While the U.S. basic voice telecom services market remains one of the most open markets in the world, most foreign countries deny U.S. firms access to their markets. Even when markets are privatized and opened, many countries enact laws that favor and protect the dominant PTO, and fail to enact laws that support fair competition. The few countries who have begun to liberalize their basic voice telecom markets have not developed policies to level the playing field between monopoly and competitive service providers that would permit the development of effective competition. These foreign regulations stymie competition and protect domestic firms from competition, unlike U.S. regulations that encourage competition.

> ***U.S. mobile/cellular operators are marginalized in several countries by foreign regulations that attempt to promote domestic service providers.***

U.S. firms face fewer restrictions in providing mobile communication services than basic services and have become significant cellular operators in some countries. Many countries have realized that foreign firms (especially U.S. firms) have technical expertise and market experience that their domestic firms cannot match. However, some countries promulgate laws that marginalize foreign firm participation or restrict it completely. U.S. firm participation in the Japanese and the South Korean cellular markets are examples of this exclusion.